

## REMARKS

In a final Office Action mailed January 5, 2007, the Examiner maintained a rejection of Claims 1 and 6- 9 under 35 U.S.C. § 103. Applicants respond to the Examiner's rejection below. In view of the remarks presented herein, Applicants respectfully request reconsideration of the merits of this application.

### Rejections Under 35 U.S.C. § 103(a)

The Examiner maintained a rejection of Claims 1 and 6-9 under 35 U.S.C. § 103(a) as obvious in view of the following combination: US Patent No. 6,295,153 to Garner; US Patent No. 5,870,176 to Sweatt & Stulen; and US Patent No. 6,262,795 to Baker *et al.* The Examiner alleged that although Garner and Sweatt & Stulen do not teach adjustment of micromirrors based upon a mathematical evaluation of illumination differences to correct non-uniformity across an area, it would have been obvious to a skilled artisan in view of Baker *et al.* Applicants respectfully disagree.

In response, Applicants enclose a Declaration by Harold R. Garner, inventor of US Patent No. 6,295,153 (the '153 patent). In the Declaration, Dr. Garner set forth the differences between the claimed invention and each of the cited documents. At the outset, one difference that bears particular emphasis is that the pending claims are drawn to methods for correcting non-uniform illumination at an individual micromirror (*i.e.*, pixel) level. In contrast, none of the cited documents disclose or suggest this novel and inventive approach. The cited documents correct non-uniform illumination at a global level (*i.e.*, across the entire array surface) and thus, lack the precision of Applicants' method.

Specifically, Dr. Garner provides that his own patent, the '153 patent, discloses a digital optical chemistry instrument that uses digital light processing (DLP), which includes a computer controlled micromirror array and fluidics system. The purpose behind his patent was to eliminate the previous need for masks in photolithographic processes.

The Examiner alleged that the '153 patent teaches the importance of exposure time and illumination intensity (Column 7, lines 46-51 and Column 8 line 56 to Column 9, line 9). As Dr.

Garner declares, the '153 patent discloses that one way to alter exposure time and illumination intensity is by using a shutter. A shutter, however, does not correct for non-uniform illumination from individual micromirrors. Instead, the shutter only controls light flow to all micromirrors on the array. Therefore, the shutter does not correct for non-uniform light coming from individual micromirrors.

In his Declaration, Dr. Garner also discusses Sweatt & Stulen and provides that Sweatt & Stulen discloses turning micromirrors between either an "on" or an "off" position, without any reference to individual micromirrors and their relation to one another. Simply turning micromirrors "on" and "off" does not correct for non-uniform light coming from individual micromirrors.

The Examiner herself, clearly acknowledged that neither Garner or Sweatt & Stulen can render the pending claims obvious. Consequently, she relied on Baker *et al.* to make a *prima facie* obviousness case. In his Declaration, Dr. Garner discusses how Baker *et al.* used a filter, and optionally a homogenizer, in an attempt to correct non-uniform illumination. Baker *et al.* admitted that these optical elements do not entirely correct non-uniform illumination. See Column 7, lines 35-40. Further, Baker *et al.* failed to mention micromirrors.

Applicants submit that in an obviousness inquiry under 35 U.S.C. § 103, an Examiner may not simply pick and choose from one document only so much of it as will support a given position, to the exclusion of other parts necessary to the full appreciation of what such reference fairly suggests to one of ordinary skill in the art. See *Bausch & Lomb, Inc. v. Barnes-Hind/Hydrocurve, Inc.*, 796 F.2d 443 (Fed. Cir. 1986). As noted above, the Examiner relied heavily on Baker *et al.* to reject the pending claims. The Examiner alleged that Baker *et al.* teaches a method of quality control that renders the pending claims obvious. The Examiner then alleged that Column 6, lines 11-28 of Baker *et al.* teaches "a variety of characteristics" are adjustable to provide the desired illumination uniformity; however, she conveniently ignored the remainder of the passage. The passage begins on line 11 with, "The filtering material . . .," and then goes on to explain that the "variety of characteristics" relate to the filtering member and include the following: (1) the thickness of the filtering material, (2) the size of the filtering

material, (3) the amount of current, voltage or electric field applied to the filtering member. Applicants disagree because nowhere in the passage does it disclose or contemplate adjusting these characteristics in a micromirror. Likewise, nowhere does this passage disclose or contemplate adjusting the time that individual micromirrors are "on" because as noted above, Baker *et al.* does not use micromirrors. Applicants submit that Baker *et al.* is directed toward methods of making and using a filter member in photolithographic systems that use masks, not micromirrors, as is evident from Baker *et al.*'s Abstract and Summary. Thus, in making this rejection, it is believed that the Examiner has not considered the whole document, rather merely parts thereof that favor the position of the Examiner.

Further, Applicants submit that one skilled in the art would not consider a filter analogous to a micromirror. By its very nature, a filter has different optical characteristics than a micromirror. There is no motivation to look to Baker *et al.* to solve the problem of non-uniform illumination resulting from the use of micromirrors when Baker *et al.* does not use such mirrors. Likewise, Baker *et al.* provides no motivation to correct non-uniform illumination at the individual micromirror level.

Moreover, one skilled in the art would find that Baker *et al.* teaches away from the pending claims. Baker *et al.* disclosed that "the uniformity in the illumination light intensity . . . may be increased" with a filter (emphasis added). See Column 6, lines 14-16. This is in direct contrast to the instant claim, in which the method is used to decrease illumination intensity of certain micromirrors to match the illumination intensity of other micromirrors. Therefore, one skilled in the art would have no reason to use the methods set forth in Baker *et al.* to correct for non-uniform illumination resulting from the use of micromirrors.

In addition, the Examiner alleged that Column 7, line 35 through Column 8, line 30 of Baker *et al.* teaches the claimed methods. However, this passage is dedicated to a "method for forming a filter member illustrated in FIGS. 3 and 4" (emphasis added). Nowhere does this passage disclose or contemplate adjusting the time that individual micromirrors are "on" because, again, Baker *et al.* fails to disclose micromirrors. Thus, Applicants question how Baker *et al.*

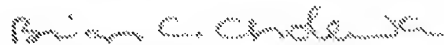
teaches adjustment of micromirrors based upon a mathematical evaluation of illumination differences to correct non-uniformity across an area when it does not use micromirrors?

Applicants submit that the combination of cited documents cannot render the pending claims obvious, as a *prima facie* case of obviousness for the claimed embodiments was not made. In view of these remarks and the Declaration of Dr. Garner, Applicants respectfully request reconsideration of this rejection as applied to Claim 1 and 6-9. A timely Notice of Allowance is solicited in this case.

Fees

A petition for a three-month extension of time and a Request for Continuing Examination (RCE) accompany this response so that it will be deemed to have been timely filed. No other extension of time is believed due, but should any additional extension be due, in this or any subsequent response, please consider this to be a petition for the appropriate extension and a request to charge the extension fee to Deposit Account No. 17-0055. No additional fees are believed due; however, if any fees are due, in this or any subsequent response, please charge Deposit Account 17-0055.

Respectfully submitted,



Brian C. Cholewa  
Reg. No. 58,392  
Attorney for Applicants  
QUARLES & BRADY LLP  
P.O. Box 2113  
Madison, WI 53701-2113

TEL (608) 251-5000  
FAX (608) 251-9166